

reader will be especially attracted by the ingenious representations of the brain drawn inside the skull as if seen by transparency, and by the really beautiful series of plates at the end of the volume.

The work is essentially a technical and a practical one. Nevertheless, a final chapter is devoted to a general summary and conclusions. Here Drs. Flatau and Jacobsohn aim, not at bringing forth sensational results, but soberly review such general conclusions as may safely be drawn at present. These, it must be confessed, are somewhat disappointing, not, be it understood, through any fault of the authors, but owing to the inherent difficulties and complications of the subject, and the comparatively few data yet at our disposal.

As to the attempt to homologise the fissures of the cerebral hemispheres with one another in the various orders of mammalia, Drs. Flatau and Jacobsohn freely adopt Gegenbaur's conclusion, that this can only be done to a very limited extent. In most of the orders we generally find some small and lowly organised forms with almost smooth brains; and it must always be borne in mind that the fissures and convolutions may to a great extent have been independently developed in each group.

Of the usefulness of this volume there can be no doubt, and the appearance of the continuation of the work will be awaited with interest by all workers in the subject of brain anatomy.

OUR BOOK SHELF.

The Origin of the British Flora. By Clement Reil, F.R.S., F.L.S., F.G.S. Pp. vii + 191. (London: Dulau and Co., 1899.)

THIS is a useful contribution to the literature of geographical botany; but it is unfortunate that the author has given it the ambitious title of "Origin of the British Flora." Any one entering upon the perusal of the book with the expectation engendered by its title will soon meet with disappointment, but must not be blinded thereby to its real merit, which is great, and consists in the historical records, to which two-thirds of it are devoted. The book is essentially a geologist's account of the palæontological evidence of the distribution of plants in Britain during recent geological periods. Every one will agree with the author in thinking that the historical method is the proper one for determining questions of origin, but that the "problem of the origin of our flora is one which can be solved by this method" is surely a sanguine forecast on his part, even allowing for the fact that the flora of our Tertiary deposits has not been worked out yet with much completeness; his work is emphatic testimony to the fragmentary character of historical evidence in relation to the British flora that has been obtained up to the present time. In his "Table showing the Range in Time of the British Flora," which includes the names of species, remains of which have been found in deposits of pre-Glacial age onwards, there are not three hundred names, and of these not all have as yet been found in deposits within the present area of Britain; and, moreover, the finds do not touch elements of the flora which have always been a crux in explanations of its origin. The first fifty pages of the book deal, in the slight manner of the magazine article rather than in the detail of a scientific treatise, with some of the problems of the origin of the present British flora. The author is on the side of those who attribute a more important influence to air-transport than to land-connection as a factor in the making of our existing flora. The Watson-Forbes hypothesis is, in a few sentences, put

on one side, and a short chapter is devoted to an account of the transport-mechanism observable in the species of the flora. In Chapter iv. we have an account of the author's idea of the geographical and climatic changes affecting Britain in the late Tertiary times; the former, the author thinks, "were of no very great importance as bearing on the past history of our flora," although they "must have tended greatly to modify local conditions, and must have sometimes aided, sometimes have hindered, the dispersal of the seeds"; the latter have left their mark on the flora; but at the same time "Britain shows signs of a geographical distribution of plants largely independent of that due to climate; or perhaps we should say not governed by existing climatic conditions." It is not, however, these brief earlier chapters which give value to the book, but the later ones, containing accounts of the deposits in which recent plants have been found and of the positions of these plants.

A Manual of Marine Meteorology for Apprentices and Officers of the World's Merchant Navies. By William Allingham. Pp. viii + 182, and plates. (London: Charles Griffin and Co., Ltd., 1900.)

WE gladly give a word of welcome to this little book, written as it is by a sailor with the view of winning an increase of interest in the subject of meteorology from members of his own profession. The author knows well those for whom he is writing, so that while he has kept his book free from pedantry, he has managed to fill it with practical information and to endow it with the spirit of earnest purpose. The encouragement of a more complete survey of the complicated phenomena manifested, not only in our atmosphere, but in the ocean itself, is highly commendable, and we should imagine the author well qualified by knowledge and experience to interest the class to whom he mainly addresses himself. For he has sailed every ocean in all sorts of weather, and having himself to some extent profited by the systematised experience of others, he seeks now to widen and complete the circle of observation, so that those who come after may have still more trustworthy sources of guidance and reader means for escaping the perilous chances of navigation.

Of course, in many respects marine meteorology goes hand in hand with meteorological inquiries conducted on shore. We may pass over all such details, since the real interest of the book is more closely connected with the practical questions which arise at sea. Among these we may enumerate wave-motion, salinity and temperature of the sea, the direction and velocity of ocean currents, and the construction and use of pilot charts. Such subjects ought to have a profound interest for an intelligent officer, and the method of treatment is likely to call forth the earnest attention of any one who wishes to become really efficient. Some of these subjects may be thought to belong rather to hydrography than to meteorology; while, again, questions connected with the behaviour of the wind in cyclones, and of the management of the ship in the neighbourhood of cyclonic disturbances, may be said to belong to the domain of seamanship or practical navigation. But there is no fixed line of demarcation between any of these subjects, and trained intelligence is of the greatest service in advancing our knowledge of subjects in which experiment and generalisation play a great part. One can easily conceive that enormous advantages would accrue to science by enlisting the services of a large army of observers, and therefore we welcome any well-considered effort which has for its end so worthy an object. The author knows perfectly well that it is impossible to do justice, within a moderate compass, to the many topics on which he touches; but his object is served, and well served, if he can arouse an active interest in the many, and induce a few to prosecute inquiries on a more comprehensive basis.